2. On a Sea-Lion from the East Coast of Australia (*Otaria cinerea,* Péron). By J. W. Clark, F.Z.S.

[Received March 18, 1884.]

In the New South Wales Court of the Fisheries Exhibition which was held last year at South Kensington, there were four stuffed Otarias belonging to the Australian Museum, Sydney. They were labelled: "A group of Australian Eared Seals. The Grey Sea-Lion (*Arctocephalus cinereus,* Gr.), from the Seal Rocks near Port Stephens, New South Wales."[1]

The following notes on the four specimens were partly communicated to me by my friend Mr. E. P. Ramsay, Curator of the Museum, partly written by myself.

1. A male from which the skull (figs. 1 and 2) had been extracted. The animal was between six and seven feet long; the hair short, stiff, and bristly, especially on the nape of the neck; the underfur red and very sparse. Colour a uniform brown, rather lighter on the head and on the back of the neck[2].

2. An animal nearly as large as the former, and said to be a female of the same species. Hair bristly; the general colour brown, but paler on the back than in the male, and on the head and neck inclining to a dusky yellow; on the under surface of the body and on the upper surface of the 'pes' and 'manus' a dark brown. The stuffer had fortunately set the jaws open, so that the teeth could be examined. The molars were $\frac{6-6}{5-5}$, each having a posterior and anterior cusp, with the exception of the first tooth in each row.

3. A small *Otaria* rather less than three feet long. It had no skull, and therefore the age could not be ascertained. Hair short and fine, with a dense underfur. Colour a yellowish grey, paler on the under surface of the body, and becoming a light brown on the upper surface of the 'pes' and 'manus.'

4. A very young *Otaria,* about two feet eight inches long, of a uniform dark brown on the back, lighter underneath.

It appears to me that nos. 1 and 2 are rightly referred to the same species, but I doubt about their being male and female; and no. 4 may very likely be a cub of the same species also. It appears to be a rule among the *Otariidæ* that the cubs are of a dark brown colour; and Mr. Ramsay informed me that this animal had unquestionably been taken from the same rocks as the former. On the other hand, I suspect that no. 3, from the density of the underfur, is a specimen of the Fur Seal of Australia, for which I ventured to revive the name *Otaria forsteri* (P. Z. S. 1875, pp. 650–677); and which is, I believe, the same as Dr. Hector's *Arctocephalus cinereus* (Trans. New Zealand Inst. 1871, iv. p. 196).

Besides these specimens I purchased a few months since a complete skeleton, not quite full-grown, said to have been obtained from

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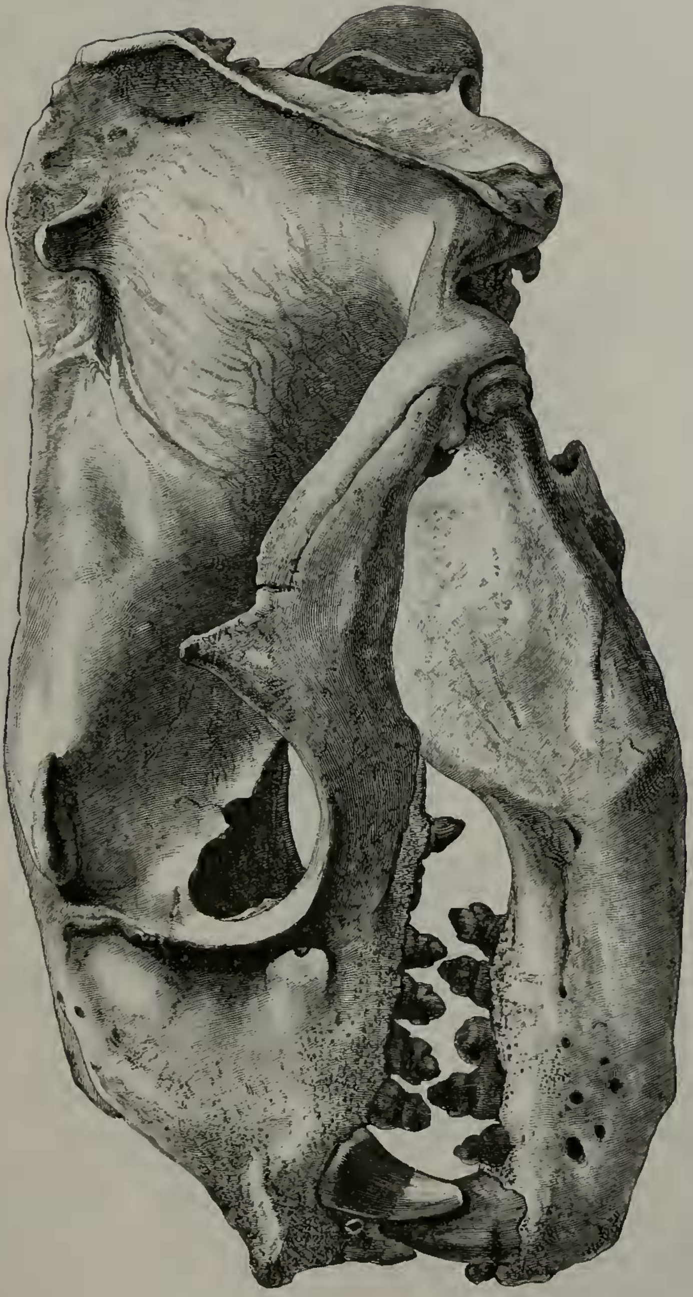
[1] Port Stephens is an inlet about 100 miles to the north of Sydney.

[2] This specimen is now in the British Museum.

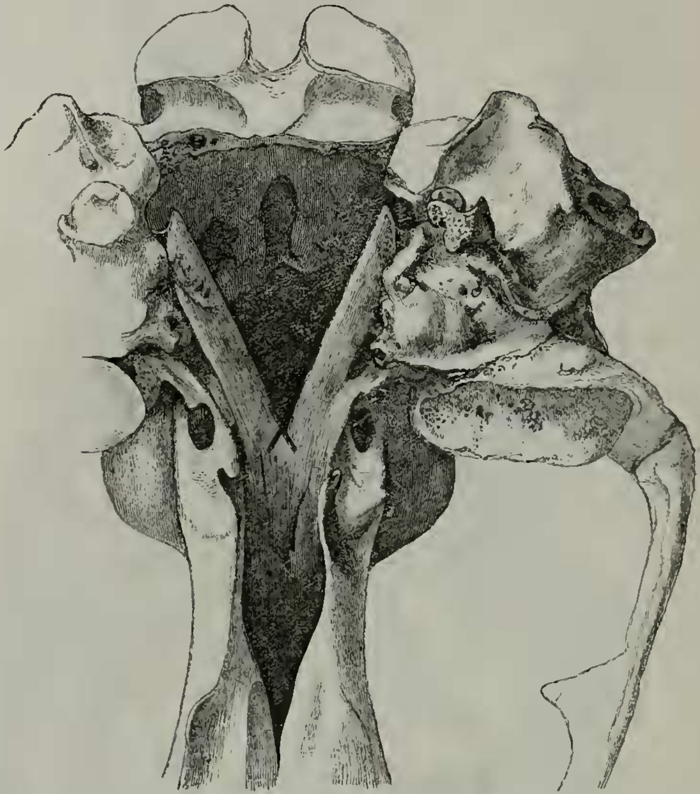
Fig. 1.



Otaria cinerea, ♂; side view of skull half natural size; from the old male specimen, No. 1 (p. 188).

the same locality; and further, Mr. Ramsay was so good as to give me a skin and skull (figs. 3–5) of an animal of about the same age, which had been taken at the same time and place as those exhibited[1]. On the evidence of the skulls, I feel no hesitation in assigning these two specimens to the same species as nos. 1 and 2 of the former group. The skin, however, is much lighter in colour. On the head and back the dark-brown hairs are tipped with yellow, and a good many yellow hairs are mixed with the others; the underside of the body is of a light brown; and a sparse underfur of the same colour lies at the roots of the hairs on the back. The upper side of the 'pes' and 'manus' is covered with very short fine hair of a rich brown.

Fig. 2.



Otaria cinerea, ♂; under surface of hinder half of skull to show the form of the opening of the palate and of the auditory bulla; half natural size; from the same specimen as fig. 1.

We have, then, before us four specimens of an *Otaria* which has been called *Arctocephalus cinereus*; and we have to investigate the history of the species, and to determine whether they have been rightly referred to it.

In 1859, Dr. Gray, in one of his numerous revisions of the Seals, enumerated *Arctocephalus cinereus* among the species which, in his judgment, ought to be referred to the genus *Arctocephalus*, proposed by Frédéric Cuvier in 1824. The species is due to a brief description by Péron, who stayed from December 1802 to February 1803 at an island off the S. coast of Australia, near Adelaide, which the French explorers called Isle Decrès, but which is laid down on modern maps as Kangaroo Island. After describing the numbers of Kangaroos, he proceeds :—" Parmi les Phocacés nombreux qui peuploient les rivages de l'île, on distinguoit surtout une nouvelle espèce du genre Otarie (*Otaria cinerea*, N.) qui parvient à la longueur de 30 à 32 décimètres [9 à 10 pieds]. Le poil de cet animal est très court, très dur, et très grossier ; mais son cuir est épais et fort, et l'huile qu'on prépare avec sa graisse est aussi bonne qu'abondante. Pour l'un et l'autre rapport, la pêche de cet amphibie offriroit de précieux avantages ; il en est de même de quelques autres espèces de Phocacés plus petites qu'on trouve également en très-grand nombre sur ces bords, et qui portent des fourrures de bonne qualité." [1]

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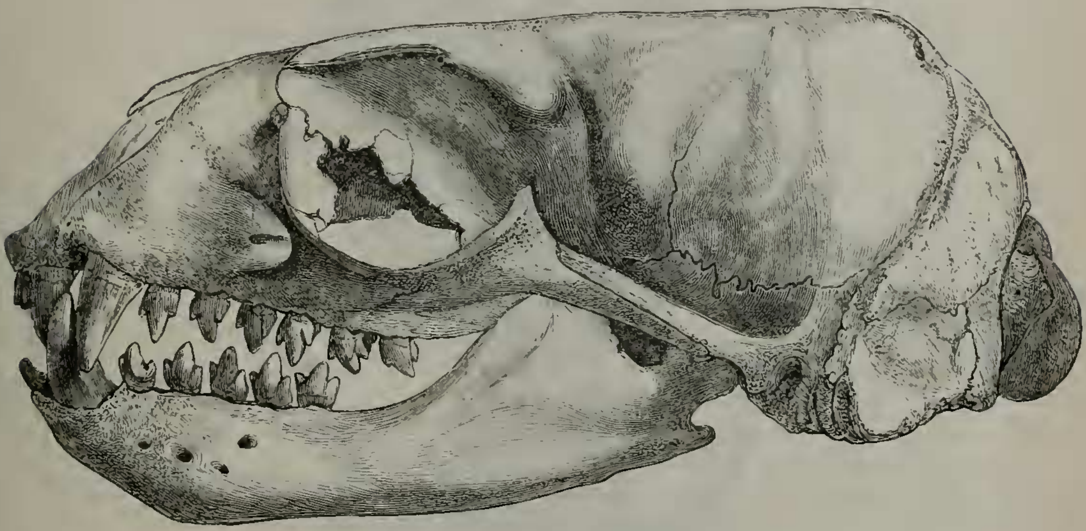
[1] These specimens are in the Museum of the University of Cambridge. The specimen purchased appears to be a male, not full-grown; that given to me by Mr. Ramsay is a female.

Fig. 3.



Otaria cinerea, ♀ ; side view of skull.

Péron, as is well known, did not live to write the work on the *Otariidæ* for which he had made preparations, and he brought home no specimens, or, if he did, they have long since disappeared. His brief notice of the *Otaria* which he intended to call *O. cinerea* tells us nothing except that the animal was what is called a " Hair Seal," for he contrasts it with others which possessed abundant underfur.

Ten years afterwards an *Otaria* was captured near Port Western in Bass's Straits, during the voyage of the 'Astrolabe.' MM. Quoy and

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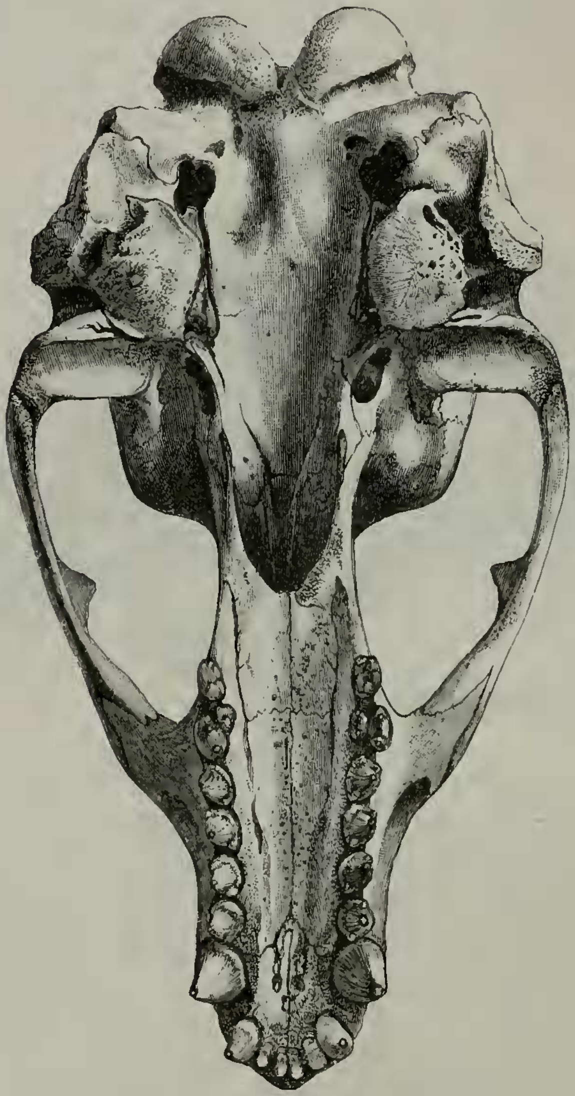
[1] Péron, 'Voyage de découvertes aux Terres Australes' (4to, Paris, 1816), ii p. 77.

Gaimard, the naturalists to the Expedition, determined to call it *Otaria cinerea,* out of deference to Péron; and, further, by way of compliment to him, they established the species in his name instead

Fig. 4.

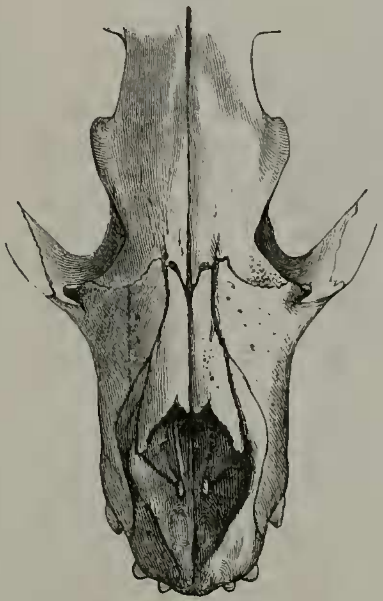


Otaria cinerea, ♀; under surface of skull.

of their own:—“Péron a nommé Otarie cendrée une espèce de Phoque prise à peu près dans les mêmes parages que notre individu. Il n'en a point donné de description qui puisse, à proprement parler, la faire reconnaître. Comme cette espèce, la même selon nous que celle qui nous occupe, a été admise dans les catalogues, nous lui laisserons le nom que lui a imposé le naturaliste que nous venons de citer."

They then proceed to describe their specimen:—"Tout le pelage en dessus est uniformément grisâtre. Cette couleur devient plus claire sur le museau. Le menton, les aisselles, les côtés de la partie postérieure et inférieure du corps sont roux. Les côtés du cou sont d'un cendré tirant sur le blanchâtre, et les oreilles sont noirâtres à leur pointe. Les membres postérieurs sont presque noirs, et les antérieurs d'un brun foncé tirant un peu sur le rougeâtre. Les poils de la tête et du cou sont longs, rudes, et grossiers; ceux des autres parties sont plus courts et plus serrés. Leur couleur cendrée résulte du mélange de ces poils dont les uns sont d'un blanc jaunâtre et les autres noirâtres. En les écartant on voit un feutre roux peu épais. Les poils qui recouvrent les membres sont très fins et serrés. Les barbes sont fortes et jaunâtres. Les ongles des membres antérieurs sont à peine indiqués. Ceux des postérieurs sont étroits; les trois intermédiaires sont plus saillans, et l'extérieur n'est point apparent."[1]

Fig. 5.



Otaria cinerea, ♀; upper surface of anterior half of skull.

I am aware that Mr. Allen[2] has recorded Péron's *Otaria cinerea* among "mythical and undeterminable species;" and had no further description of it been given than the original notice cited above, I should have considered that he was right in so doing; but as MM. Quoy and Gaimard thought proper to sink their own individuality in that of Péron, it seems to me that we have no choice left but to accept the species with Péron's name attached to it, more especially as they brought home a skin and skull, both of which are figured in their work, and are now in the Museum of the Jardin des Plantes. These specimens ought, I submit, to be considered as the type of the species; and it was after a careful examination of them that I ventured on a former occasion to mention *Otaria cinerea* as one of the four distinct species of *Otaria* inhabiting the Australian coast (P. Z. S. 1875, p. 676).

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[1] 'Voyage de découvertes de l'Astrolabe.' Zoologie par MM. Quoy et Gaimard, i. p. 89, plates 12, 13, 15.

[2] 'History of North-American Pinnipeds.' By J. A. Allen. 8vo, Washington, 1880, p. 215.

I have taken the skulls now before us to Paris and compared them with the type of *Otaria cinerea*, and there can be no doubt that they should all be referred to that species.

The type skull is of an animal not quite adult, stated by the authors to be a male; it is in excellent condition; and the teeth have never been displaced. It is $10\frac{1}{2}$ inches long by $6\frac{1}{2}$ inches broad across the zygomatic processes. The form of the nasals and of the orbital process of the frontal will be better understood from the figure of the same bones here given (fig. 3, p. 191) than from any description. Immediately behind these processes the skull contracts suddenly, so that while the width across the processes is $2\frac{1}{2}$ inches, that across the narrowest portion of the skull behind them, close to the braincase, is only $1\frac{1}{2}$ inch. The dental series is, as usual:—

$$\text{i. } \frac{6}{4},\ \text{c. } \frac{1-1}{1-1},\ \text{m. } \frac{6-6}{5-5}=36.$$

In the molar teeth the "cingulum" is very feebly developed; and each tooth, both in the upper and lower jaw, has a posterior and an anterior cusp, characters which are very useful in separating this species from that which appears to be most nearly allied to it, *Otaria albicollis*, Péron, = *O. australis*, Quoy and Gaimard, of which there is a fine series in the same museum. The opening of the palate is long and V-shaped (fig. 4, p. 192), and the auditory bulla is prolonged posteriorly into a peg-like process (figs. 2 & 4, pp. 190, 192).

Of the skulls before us, the largest (figs. 1, 2) undoubtedly belongs to a full-grown male. It is $11\frac{3}{4}$ inches long by $7\frac{1}{2}$ broad, measured across the zygomatic arches. The occipital and sagittal crests, and the parietal processes, are all fully developed, and the nasals are nearly obliterated by anchylosis with the premaxilla. It is, however, easy to see that the form of these bones, and of the upper part of the skull generally, is identical with the female skull (fig. 5, p. 193), which has been already referred to as closely resembling the type specimen. The palate in the male skull (fig. 2) is more elongated than in either of the others or in the type specimen; but, useful as the form of this part is for specific determination, it must be remembered that it is subject to remarkable individual variations, the neglect of which has led to a needless multiplication of species[1]. In order to show this more clearly, I subjoin figures (fig. 6) of the palates of two skulls of *Otaria ursina*, which I observed in the Royal Museum at Berlin, in August 1875. In the skull marked *A* the opening of the palate is normal, in that marked *B* it is abnormally elongated; but in all other respects the two skulls are perfectly similar.

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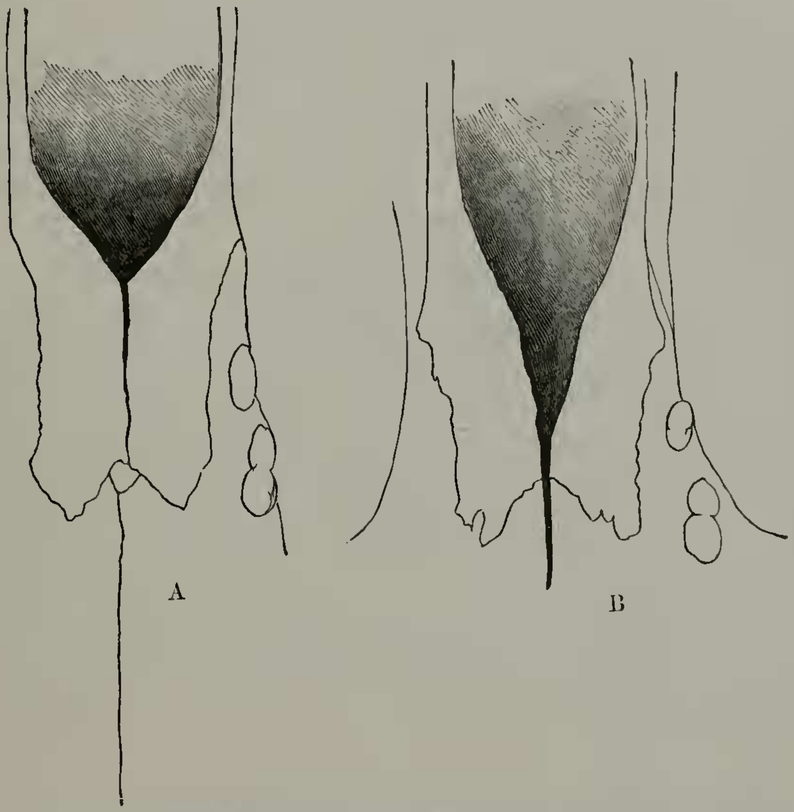
[1] I hope my friend Professor Turner will forgive me if I quote his *Euotaria schisthyperöes* (Journ. Anat. 1868, p. 113) as an instance of this. I feel tolerably sure that the skull so named should be referred to *Otaria pusilla*.

The skull (figs. 3–5) which I take to be that of a female has been already sufficiently described. It is 9 inches long by $4\frac{3}{4}$ inches broad. The peculiar form of the teeth, with the strongly developed anterior and posterior cusps, is well shown in the side view (fig. 3); and again in the view of the under surface of the skull (fig. 4). The third skull is probably of a young male; it is 9 inches long by 5 inches broad. It does not appear necessary to figure it, as it reproduces the characters already remarked in the female on a slightly larger scale.

Fig. 6.



Palates of *Otaria cinerea*; to show variation in the form of the opening. A, normal form; B, abnormal form.

I must now say a few words on the external characters. The skin of the type specimen is preserved in the Zoological Gallery of the Muséum at the Jardin des Plantes. It is marked " Otarie cendrée ♂. *Otaria cinerea*, Péron, *Phoca cinerea*, Fisch. Des côtes de la

Nouvelle Hollande par MM. Quoy et Gaymard." It has been much distorted in stuffing, but indicates a large brown or brownish-grey animal, like the figure in the 'Voyage de l'Astrolabe,' plate 12. The description quoted above, on the other hand, indicates an animal rather grey than brown, like the skin of the female which I have received from Mr. Ramsay. The adult male, however, at the Fisheries Exhibition, and the second specimen there, which I take to be a young male, agree fairly well with the type specimen at Paris and with the figure. I would suggest that the description may have been taken from a female skin, which MM. Quoy and Gaimard believed to belong to a male, while the figure (which appears to have been drawn on the spot, for the authors say that the attitude is that in which the animal lay after death) was really of a male. We know, however, so little about the external appearance of Otarias, and they look so different according as they are young or old, wet or dry, that we must wait for further material before these points can be cleared up. For the same reason I would for the present return to the original generic name, and refer these specimens to *Otaria cinerea*, Péron.

In 1874 Dr. Gray received a somewhat imperfect skull of an *Otaria* from Dr. Hector, which he referred to this species by comparing it with Quoy and Gaimard's figure, though, as was his wont, he made a new genus for it, and called it *Euotaria cinerea*[1]. This skull is now in the British Museum, along with others received subsequently from Dr. Hector. These skulls are undoubtedly of the same species as that to which, as mentioned above, Dr. Hector has given the name *Arctocephalus cinereus*, or "Fur Seal of Australia." Whether this Fur Seal be identical with the small Fur Seal which I have called *Otaria forsteri*, as mentioned above, is a question which cannot be settled until we obtain a larger series of specimens of different ages and sexes; but I feel certain that it is different from the *Otaria* now before us. The skulls are all broader in proportion to their length; and the molars have not the three prominent cusps which appear to be characteristic of this species.

3. On two new Genera of Spiders.

By the Rev. O. P. Cambridge, M.A., C.M.Z.S., &c.

[Received March 18, 1884.]

(Plate XV.)

Mr. H. O. Forbes has lately described (Proceedings of this Society, 1883, p. 586), under the provisional name of *Thomisus decipiens*, the habits of a Spider which he met with in Sumatra and Java. The Spider itself is remarkable from its exact resemblance to

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[1] 'Hand-List of Seals, Morses, Sea-Lions, and Sea-Bears in the British Museum' (8vo, London, 1874), p. 34.